

# Arizona Health Improvement Plan

## Healthcare Associated Infections (HAI)

Criteria	Health Issue Data/Information
<p><b>Scope or Magnitude of the Problem</b></p> <ul style="list-style-type: none"> <li>How many people across Arizona are affected by the health issue?</li> </ul>	<ul style="list-style-type: none"> <li>HAI data are not directly reportable to ADHS. The data below represent select HAI types reported by hospitals to CDC's National Healthcare Safety Network. The data only include HAIs attributable to hospitals and do not include other healthcare facility types (e.g., ambulatory surgery centers, dialysis, long-term care, etc.)</li> <li>AZ hospital-based HAI cases <a href="#">reported</a> to CDC, 2012: <div data-bbox="879 496 1541 1002" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p><u>Central line-associated bloodstream infection (CLABSI)</u> 351 cases</p> <p><u>Catheter-associated urinary tract infections (CAUTI)</u> 592 cases</p> <p><u>Surgical site infections (SSI) following colon surgery</u> 204 cases</p> <p><u>SSI infections following abdominal hysterectomy</u> 57 cases</p> <p><b>Total number of AZ hospital HAI cases due to CLABSI, CAUTI, SSI-colon, and SSI-hyst; 2012 - 1,204</b></p> </div> </li> <li>While the infection types above are examples of HAIs, any infection associated with healthcare is considered an HAI. This includes disease outbreaks in healthcare facilities and blood borne pathogen exposures related to unsafe injection practices. In the last year, 12 HAI outbreak investigations occurred in AZ</li> </ul>
<p><b>Severity (Morbidity / Mortality)</b></p> <ul style="list-style-type: none"> <li>Does the health issue result in death, disability, or ongoing illness?</li> </ul>	<ul style="list-style-type: none"> <li>HAIs are one of the leading causes of preventable death in the US. <a href="#">Research</a> has shown that HAIs are association with about 75,000 deaths annually</li> <li>HAIs are also a significant cause of morbidity. Due to their invasive nature , infections often require lengthy hospital stays. In addition, many organisms responsible for HAIs, are resistant to antibiotics, making treatment difficult and prolonging symptoms in those infected</li> </ul>
<p><b>Potential to Impact (Winnable Battle)</b></p>	<ul style="list-style-type: none"> <li>Currently, ADHS has federal funding to support a full-time HAI Coordinator. The coordinator facilitates a multi-disciplinary <a href="#">advisory group</a> and 6 associated subcommittees to address HAI</li> </ul>

<ul style="list-style-type: none"> <li>• What resources (funding, workforce, programs, etc.) are available to address the health issue?</li> <li>• Can progress be made on the health issue within five years?</li> <li>• Could addressing the health issue also address other problems at the same time?</li> </ul>	<p>prevention statewide. The Advisory Committee and subcommittees have been in existence since 2009 and have over 100 active members representing state and local public health, healthcare facilities, healthcare consumers, and healthcare payers</p> <ul style="list-style-type: none"> <li>• <a href="#">Arizona</a> has seen incremental improvements in CLABSI rates since initiation of the HAI Prevention Program. Other infection types have increased over the past several years, but this may be due to improved surveillance and reporting</li> <li>• The multi-sector commitment to HAI prevention, and the statewide efforts to coordinate these activities between public health departments, healthcare facilities, healthcare associations (AzHHA, AHCA), and quality improvement organizations demonstrates a well-supported approach to prevention</li> <li>• CMS shifts to pay-for-performance models and required HAI reporting incentivize healthcare facilities to aggressively address HAI prevention</li> </ul>
<p><b>Cost-Effectiveness</b></p> <ul style="list-style-type: none"> <li>• What is the cost of not addressing the health issue? For example, how does it impact health care costs or Medicaid costs?</li> <li>• How much money can be saved by addressing the problem?</li> <li>• Does the money put into a solution reduce costs enough to make the solution worthwhile?</li> <li>• What's the value of addressing the health issue?</li> </ul>	<ul style="list-style-type: none"> <li>• The most recent <a href="#">cost estimates</a> for HAIs indicate that annually, the direct medical costs of HAIs to US hospitals range from \$35.7 billion to \$45 billion. These estimates do not include costs to other healthcare facility types</li> <li>• Annual cost effectiveness for hospital –based HAI prevention ranges from \$5.7 -\$31.5 billion nationally depending on the infection type</li> <li>• In many cases, HAI prevention is cheap. For example, implementation of checklists and bundles (prepositioned carts with all necessary supplies) are effective at reducing CLABSIs, which are estimated to carry \$16,550 in excess healthcare costs each</li> </ul>
<p><b>Quality of Life</b></p> <ul style="list-style-type: none"> <li>• How does the health issue impact daily living activities? How does it impact usual activities, such as work, self-care, or recreation?</li> </ul>	<ul style="list-style-type: none"> <li>• People with an HAI are often hospitalized, resulting in decreased ability to participate in daily living activities including work and recreation</li> </ul>
<p><b>Disparities</b></p> <ul style="list-style-type: none"> <li>• How are groups of people affected differently by the health issue?</li> <li>• Are some groups of people more likely to be affected by the health issue than others? How significant are the differences?</li> </ul>	<ul style="list-style-type: none"> <li>• HAIs can affect anyone who is hospitalized or receiving care in a healthcare facility</li> <li>• Because older adults, immunocompromised individuals, and individuals with special healthcare needs are most likely to require healthcare in a facility, these population groups are more likely to experience an HAI</li> </ul>

<ul style="list-style-type: none"><li>Types of disparities can include but are not limited to racial and ethnic groups, geographic location, age, gender, income, education, etc.</li></ul>																
<b>Evidence-based Models Exist</b> <ul style="list-style-type: none"><li>Are evidence-based models relevant to cultural and geographic differences? For example, will they work in rural as well as urban communities?</li></ul>	<ul style="list-style-type: none"><li>A multitude of scalable evidence-based HAI prevention models exist, ranging from those that involve very minor and inexpensive workflow changes, to very expensive systems overhaul</li><li>These models are relevant to a variety of settings and are freely available through <a href="#">CDC</a>, and the <a href="#">Society for Healthcare Epidemiology of America</a></li></ul>															
<b>Community Readiness / Interest in Solving</b> <ul style="list-style-type: none"><li>What’s the degree of public support and/or interest in working on the health issue?</li><li>Which counties include this issue as a community health priority?</li></ul>	<ul style="list-style-type: none"><li>HAI prevention is not currently a top community health priority in any of the county assessments, but is a winnable battle at the <a href="#">state</a> and <a href="#">federal</a> level</li></ul>															
<b>Arizona Ranking below the US data</b> <ul style="list-style-type: none"><li>Is Arizona doing better or worse than the U.S.?</li><li>How much better or worse are we doing compared to the nation?</li></ul>	<ul style="list-style-type: none"><li>For most HAI indicators, Arizona is doing significantly worse than the US. HAI data is generally depicted with a standardized infection ratio (SIR). For this metric, <u>lower numbers are better</u>. SIRs above 1 indicate a greater number of infections that predicted</li><li>Standardized Infection Ratios, 2012:<table><tr><th>Infection Type</th><th>AZ SIR</th><th>US SIR</th></tr><tr><td>CLABSI</td><td>0.64</td><td>0.56</td></tr><tr><td>CAUTI</td><td>1.11</td><td>1.03</td></tr><tr><td>SSI, Colon</td><td>1.12</td><td>0.80</td></tr><tr><td>SSI, Hyst</td><td>1.23</td><td>0.89</td></tr></table></li></ul>	Infection Type	AZ SIR	US SIR	CLABSI	0.64	0.56	CAUTI	1.11	1.03	SSI, Colon	1.12	0.80	SSI, Hyst	1.23	0.89
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<b>Political Feasibility</b> <ul style="list-style-type: none"><li>Is there enough support from elected officials or other policymakers to help move a strategy to implementation?</li></ul>	<ul style="list-style-type: none"><li>HAIs have been a topic of interest within Arizona and nationally. In 2009, the Arizona Legislature passed a bill to establish the Infection Prevention and Control Advisory Committee to make recommendations regarding mandatory HAI reporting in Arizona. The federal government supports HAI prevention through funding appropriations to states through the CDC, HRSA, and NIH</li></ul>															
<b>Trend Direction</b> <ul style="list-style-type: none"><li>Has the health issue been getting better or worse over time?</li></ul>	<ul style="list-style-type: none"><li>In some cases, HAI rates are increasing over time, likely due to the increased surveillance of HAIs. HAIs that have been monitored the longest (e.g., CLABSI) have seen reductions in infection rates over time</li></ul>															